

A SYSTEMATIC APPROACH TO TRAINING: A TRAINING NEEDS ASSESSMENT

by

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In an effort to determine the gap between the actual performance and the necessary performance of employees for the effective and efficient accomplishment of an organization's mission and goals, an organization-wide Training Needs Assessment must be conducted. The first Center-wide Training Needs Assessment Process of this magnitude commenced May 1, 1989.

The purpose of the work this summer was to conduct a training needs analysis and prepare a NASA Langley Catalog of On-Site Training programs. The work included developing a Training Needs Assessment survey (Encl. 1), implementing the survey, analyzing and researching the training needs, identifying the courses to meet the needs, preparing and designing an On-Site Training Catalog.

This needs analysis attempted to identify performance weaknesses and deficits; seek out and provide opportunities for improved performance; anticipate and avoid future problems; enhance and create new strengths. The end product is a "user-friendly" catalog of on-site training available.

The results include:

- Top-down approach to needs assessment
- Improved communication with Training Coordinators
- 98 per cent return rate of Training Needs Assessment survey
- Complete, newly designed, "user-friendly" catalog
- 167 catalog courses descriptions advertised
- 82 new courses advertised
- Training Logo
- Request for Training Application Form

Once the Training Needs Assessment Survey was initially designed and developed, Administrative Assistants followed by Training Coordinators were briefed on its contents. These meetings resulted in a slightly redesigned survey to meet their concerns. This was distributed to 61 Directorates, Division, or Project Offices Centerwide. Division Chiefs were asked to consult with their Branch Heads, Training Coordinators, and employees to determine their specific training needs

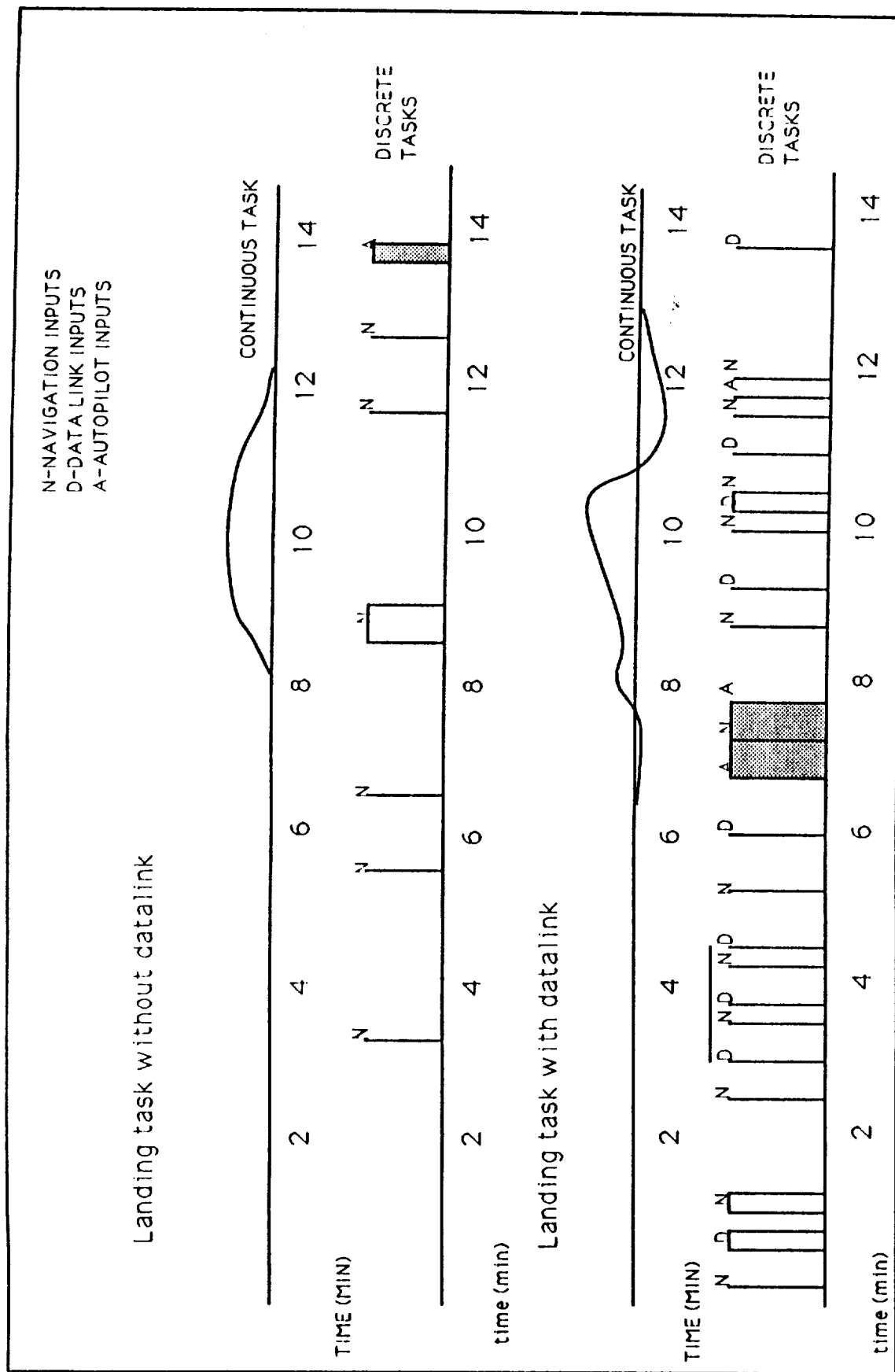


FIGURE 1. Distance from flight path (continuous task) and occurrence of discrete tasks in a simulated landing task.

according to three skill areas: technical, automated data processing, and human relations.

The following steps were conducted:

- Determined the short-term objectives of the needs analysis
- Developed a Proposed Plan of Action and Milestones (POAM) (Encl. 2)
- Identified the population
- Determined the format for data collection
- Administered the survey through Division Chiefs/ Project Offices
- Designed catalog format
- Enlisted Graphics for cover and spine design
- Researched, analyzed, and compiled data
- Contacted Training Coordinators for clarification of requested needs
- Charted the results Centerwide, by Directorate, by Category, by Function per participant
- Listed training needs and support data
- Identified problem areas
- Developed course descriptions and development strategies
- Prepared the document
- Proofread and edited document
- Prepared Vugraph presentations for each Directorate for course validation of Centerwide and Directorate results
- Presented document to Technical Editing for grammatical corrections
- Presented document to Graphics for layout design and preparation for printer

This effort is the first step in a three year process of an on-going assessment. This process must be continuous and must grow from the initial findings. The Educational Development Specialists must continue consulting with Training Coordinators, Branch Heads, and Section Heads to identify the needs. Some Training Coordinators or supervisors may need to be trained to identify what is or is not a training need. Training must be sensitive to these needs.

As part of this on-going process it appears best to design the needs analysis for administration to different levels. Each level should be approached differently. For upper level management, a one-on-one interview with highly structured questions by an outside consultant who is familiar with the Center's strategies and objectives is recommended. For branch personnel, conduct a needs inventory and one-on-one interviews with a random sampling to clarify findings in the needs inventory.

The success will ultimately be measured by the extent to which management sought to answer the question "What good will training do?" and then by "What good did it do?" A need analysis that does not establish the criteria by which training's success can be measured has not done its job. Once training is accomplished management should assess if training accomplished the desired results.

Proposed Needs Assessment Process - Milestone Chart

Action	May	June	July	August	September	October	November	December	January
Develop survey form	1-1								
Brief Training Coordinators	24								
Survey hand-carried to Program Directors' Administrative Offices	1								
Survey distributed to Division Chiefs from Program Directors	2								
Division Chiefs implement survey and gather input from each Branch Head prior to completing the survey	2-9								
Survey returned to TES (APT Coordinator)	12								
Analyze data from survey	12-1	7							
Meet by Dir. with Division Chiefs and Training Coordinators			10-14						
Preparation of document			10-21						
Document to printer			21						
Distribute document to each employee				15					
Registration material returned to TES				22					
Complete purge of FY 89 data					15				
Complete data processing of registration requests					15				
Analyze training requests, conduct preliminary market survey, project budget requirements					15-29				
Brief Program Directors/Division Chiefs to prioritize requests within budget parameters						2-13			
Schedule courses, select vendors, award contracts, and develop in-house course curriculum						begin 16			
Notification to training coordinators and employees						16			
Evaluate FY 90 assessment process									
Begin development of assessment process for FY 91-92									1990

04-24-89

Enclosure (1)

NASA Langley Research Center
On-Site Training Needs Assessment Survey Form
Fiscal Year 1990

Office of the Director

Signature

Date

Karen W. Evans
Extension 46112
Mail Stop 103

Return completed packet to Dr. Mary H. Lewis,
Mail Stop 309, by June 16, 1989.

Suggested Guidelines for Completion of the On-Site Training Needs Assessment Survey Form

This needs assessment survey packet will be the primary mechanism for identifying on-site training for Fiscal Year 1990. A needs assessment comes at the beginning of any systematic approach to training and development, before anyone is taught anything in any setting or through any technology. During the assessment, the answers to the questions serve as a basis for decisions about the nature of the training to be provided. Naturally, better programs are derived from better assessments.

Our needs assessment is done to gain an understanding about the gap between what is happening and what ought to be happening. Our search is for information about the proficiency, criticality, and frequency of three skill areas: technical, human relations, and automated data processing. Once skill areas have been identified, the training staff will prepare and distribute to each employee a publication outlining courses and providing registration materials for FY 1990.

Answers to the following questions may help you as you consider the three skill areas as they apply to the functional work groups:

1. What do employees need?
2. What do they want?
3. Where are they having problems?
4. Where can we get the most impact for our developmental dollars?
5. What are management priorities for employee growth and development?
6. What are employee priorities? Why?
7. Of all the possible arenas toward which we might direct resources, which ones hold the most promise for the organization and for the employees.

As a result of feedback obtained from the Training Coordinators' briefing on May 24, 1989, a separate form is provided for your convenience for each functional category.

Specific course titles are not necessary; however, if you are familiar with a course, please attach a course description, brochure, or topical outline.

Please complete this packet by June 16, 1989, and return to Dr. Mary H. Lewis, Mail Stop 309.

Suggested Roles and Responsibilities

Training Coordinators

1. Review the entire packet, including enclosures.
2. Distribute copies to branch heads.
3. Consult with branch heads.
4. Survey employees, both civil service and contractor.
5. Review identified needed skill areas with division chiefs/office heads.
6. Complete the survey according to the examples provided.
7. Make sure the packet is returned by **June 16, 1989**, to Dr. Mary H. Lewis, Mail Stop 309.

Branch Heads

1. Consult with training coordinators.
2. Survey employees, both civil service and contractor.
3. Brief division chiefs.

Division Chiefs

1. Give packet to training coordinators.
2. Review data collected by training coordinators and branch heads.
3. Prioritize identified skill areas.
4. Sign the cover sheet and return the packet to Dr. Mary H. Lewis, Mail Stop 309, by **June 16, 1989**.

Employees

Provide input to branch heads, division chiefs, training coordinators, or other designated officials.

If necessary, contact Dr. Mary H. Lewis at extension 42596 for assistance.

Researchers/Engineers

	Number of Employees Targeted	Preferred Length of Instruction	Preferred Training Month(s)
Technical Skills: Specialized knowledge, skills, abilities required Example: Knowledge of Fluid Dynamics	5	32 hours	September
Human Relations: Interpersonal skills Example: Dealing with Difficult People	4	8 hours	Any month except March
Automated Data Processing: Computer-related skills Example: Personal Computer Training (dBase III)	6	12 hours	February

If you are familiar with a course that would meet any of these needs, attach a course description, brochure, or topical outline if available.

Technicians

	Number of Employees Targeted	Preferred Length of Instruction	Preferred Training Month(s)
Technical Skills: Specialized knowledge, skills, abilities required Example: Joining of Metals by Spot Welding	5	30 hours	November
Human Relations: Interpersonal skills Example: Managing Stress	4	16 hours	June
Automated Data Processing: Computer-related skills Example: CAD-CAM Training	6	30 hours	February

If you are familiar with a course that would meet any of these needs, attach a course description, brochure, or topical outline if available.

Administrative Professionals

	Number of Employees Targeted	Preferred Length of Instruction	Preferred Training Month(s)
Technical Skills: Specialized knowledge, skills, abilities required Example: Time Management	5	8 hours	November
Human Relations: Interpersonal skills Example: Listening Skills	4	8 hours	March
Automated Data Processing: Computer-related skills Example: Writing reports using the personal computer	6	12 hours	February

If you are familiar with a course that would meet any of these needs, attach a course description, brochure, or topical outline if available.

Supervisors/Managers/Executives

	Number of Employees Targeted	Preferred Length of Instruction	Preferred Training Month(s)
Technical Skills: Specialized knowledge, skills, abilities required Example: Understanding advanced concepts of project cost planning	5	32 hours	June
Human Relations: Interpersonal skills Example: Interviewing Techniques	4	8 hours	March
Automated Data Processing: Computer-related skills Example: Personal computer (Lotus 1-2-3)	6	32 hours	March-April

If you are familiar with a course that would meet any of these needs, attach a course description, brochure, or topical outline if available.

Secretaries/Clericals

	Number of Employees Targeted	Preferred Length of Instruction	Preferred Training Month(s)
Technical Skills: Specialized knowledge, skills, abilities required Example: Editing and Proofreading Skills	5	16 hours	November
Human Relations: Interpersonal skills Example: Understanding the effects of non-verbal communications or interactions with others	4	24 hours	March
Automated Data Processing: Computer-related skills Example: Macintosh Training - MacWord	6	20 hours	April-May

If you are familiar with a course that would meet any of these needs, attach a course description, brochure, or topical outline if available.